

FLOOD INSURANCE STUDY

FALMOUTH, MASSACHUSETTS



PREPARED FOR

FEDERAL INSURANCE ADMINISTRATION

BY

**DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION, CORPS OF ENGINEERS
WALTHAM, MASS.**

DECEMBER 1972

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FALMOUTH, MASSACHUSETTS

FLOOD INSURANCE STUDY

1. Authority for Study. This study was prepared at the request of the Federal Insurance Administration, U. S. Department of Housing and Urban Development, under the authority of the National Flood Insurance Act, Public Law 90-448, dated August 1968, and subsequent criteria. The study provides data required for the Federal Insurance Administration to prepare flood hazard boundary maps and flood insurance rates for the town of Falmouth, Massachusetts. Authority for the New England Division to perform the study is contained in a letter from the Office of the Chief of Engineers, ENGCW-PF, subject: Type 15 Flood Insurance Studies, dated 11 November 1971.
2. Financing of Study. This study was financed by the Federal Insurance Administration on a reimbursable basis with billing for work performed being made directly to the Federal Insurance Administration by the Corps of Engineers under Inter-Agency Agreement (IAA)-H-15-72.
3. Description of Area. Falmouth is located in eastern Massachusetts at the southwest end of Cape Cod, some 70 miles from Boston. It is bordered on the north by Bourne and Sandwich, on the east by Mashpee, on the west by Buzzards Bay and on the south by Vineyard and Nantucket sounds. The land surface is rough in the westerly part of the town, but becomes more level to the east with numerous cranberry bogs and ponds. The shoreline along Buzzards Bay is very irregular with many inlets while the south shore is characterized by a series of long, narrow peninsulas and tidal estuaries the mouths of which are variably obstructed by barrier beaches. This gives the town some 55.4 miles of tidal shoreline. Falmouth has a land area of 44.5 square miles and a population of 16,133 according to the 1970 census count. This is an increase of 23.7 percent in population since 1960 and gives the town a population density of 363 inhabitants per square mile. For years the town has been a popular resort area and, with the recent development of the tourist industry as "big business", has become one of the state's leading vacation areas. Its economy is based, therefore, principally on retail trade and services, with maximum employment and volume of business during the summer months. Manufacturing in the fields of construction materials, printing and research instruments and equipment is the second largest employer. Flooding

can occur along the entire coast from unusually high tides associated with hurricanes and other major storms.

4. Hydrology and Zones Involved. Subsequent to the hurricane of August 1954 which caused extensive flood damage along the entire southern New England coast, Public Law 71, dated 15 June 1955 directed "an examination and survey to be made of the eastern and southern seaboard of the United States with respect to hurricanes." Pursuant to this law, an interim report of survey for the Wareham-Marion area was prepared and submitted to Congress in July 1962. Extensive hydrologic studies were made of the tidal hydraulics of the Wareham area, and other areas of concentrated damages along the New England coast. Based on these studies, stage-frequency relationships were developed for several reaches along the shores of Buzzards Bay. A portion of the Falmouth coastline lies within one of these reaches. Since the rest of the town's coastline, on both Buzzards Bay and the sounds to the south, has similar hydraulic characteristics the entire coastline has been treated as a single unit in this study and is designated Reach 1. The town has been divided into five flood hazard zones designated A, B, C, D and V. Zone A is the approximate area prone to flooding by the 100-year flood, elevation 11.0 feet m. s. l., and Zone B is the area between the limit of the 100-year flood and the Standard Project Hurricane (500-year flood) elevation 13.5 feet m. s. l. Because of the sharpness of much of the topography and small vertical interval between the 100-year and SPH elevations it was not always possible to delineate Zone B on maps at the scale used. In areas where Zone B is not shown, the A zone has been extended to the SPH elevation. Zone V defines portions of the shoreline considered to be high hazard or wave action areas. Zone C comprises areas of minimal flood hazard. Zone D indicates an area of possible flood hazard that has not been evaluated. In the case of Falmouth this includes most of the area north and east of Route 28, an area of numerous ponds and cranberry bogs.

The stage-frequency curve used in determining flood elevations for Reach 1, shown in the following table is included as Plate I-1.

ELEVATION-FREQUENCY DATA

<u>Frequency in Years</u>	<u>Elevation in feet M. S. L. Reach 1</u>
10	7.3
25	8.6
100	11.0
500	13.5
Ft. Diff. 10 & 100-year	3.7

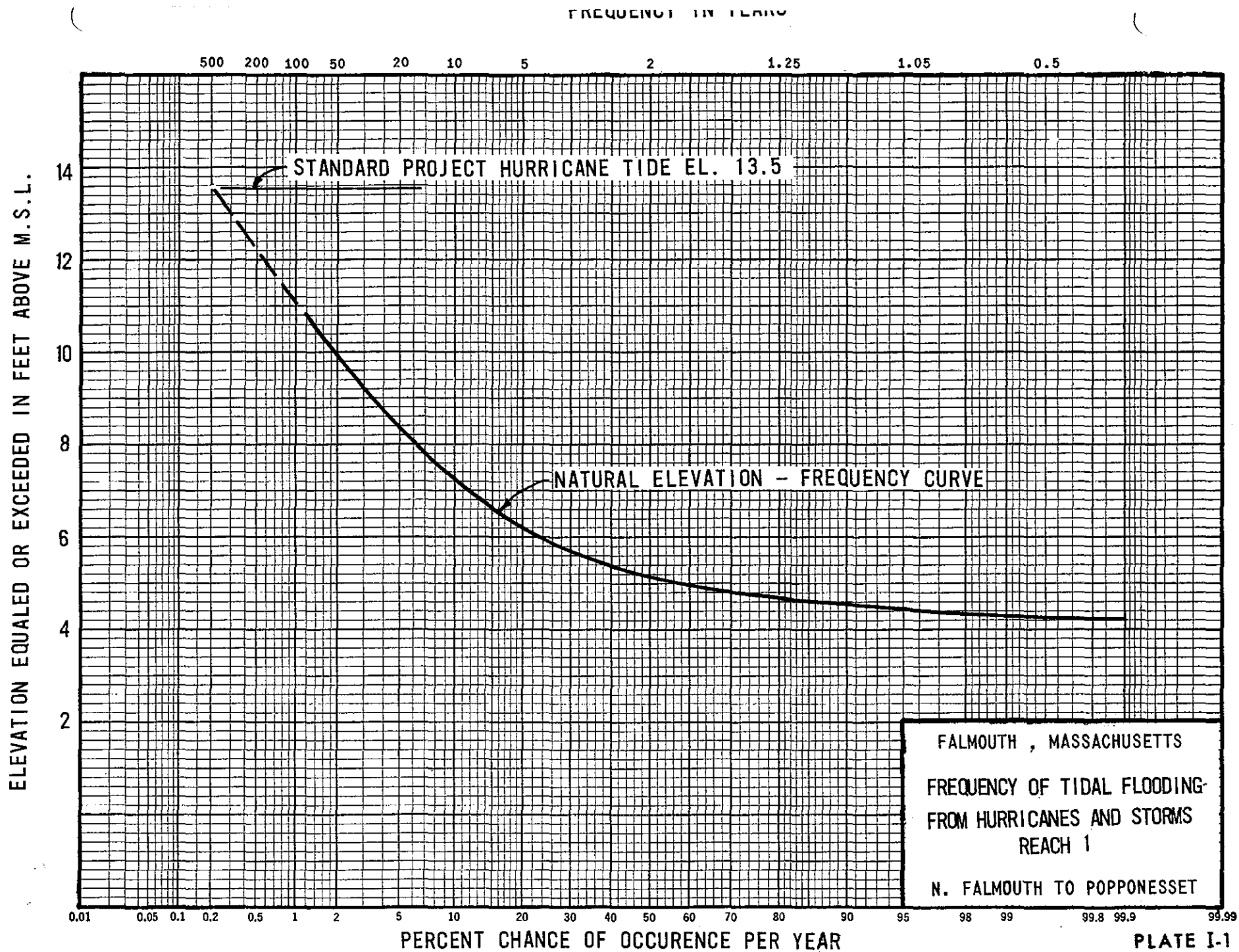
The Flood Hazard Factor (FHF) was determined from the nearest frequency curve for the area under study.

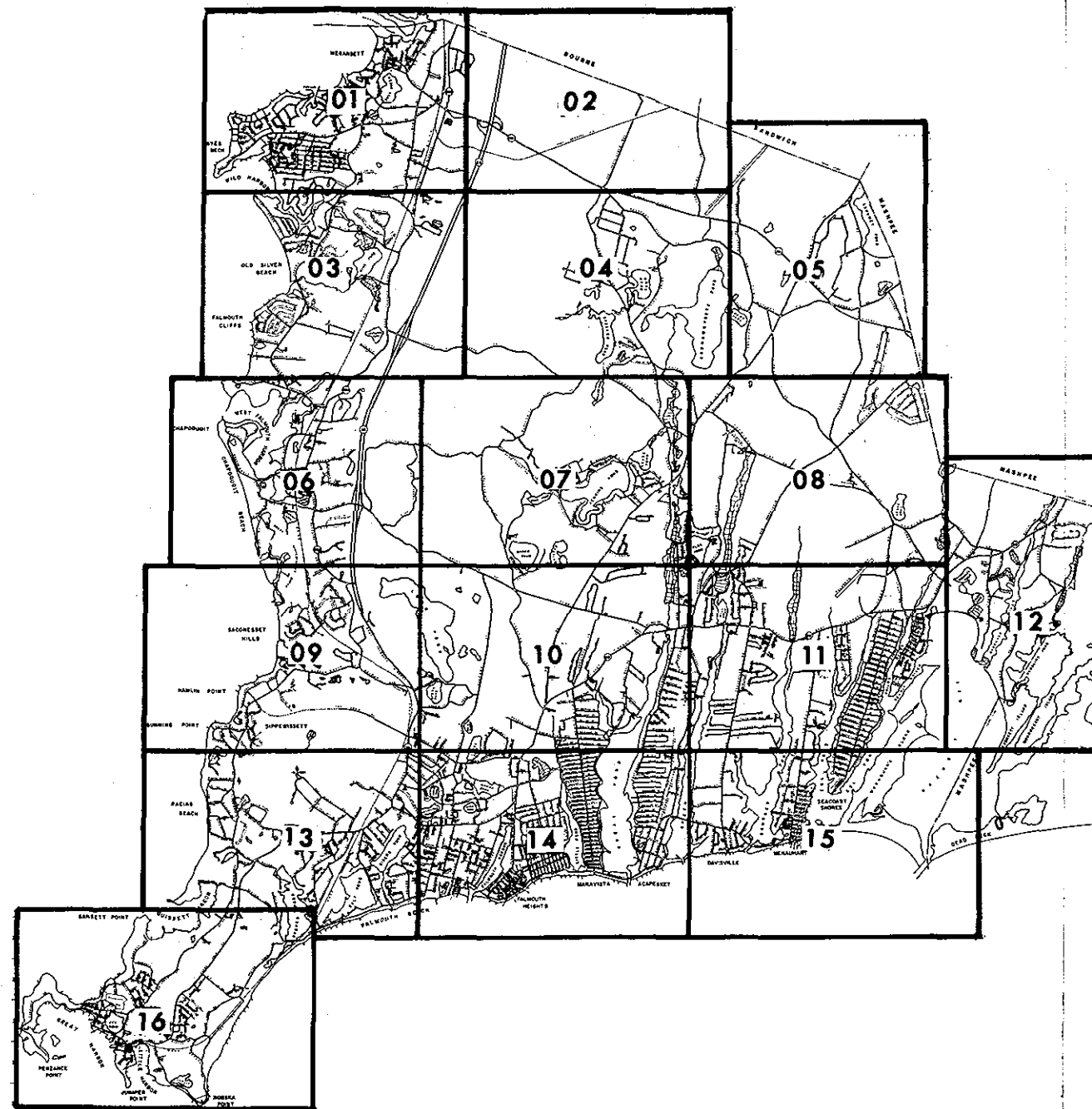
FLOOD HAZARD FACTORS

<u>Reach No.</u>	<u>Flood Hazard Factor</u>
1	035E

5. Types of Residences. Housing in the flood-prone areas of Falmouth consists principally of year-round residences interspersed locally with summer homes. These residences vary in type, size and age but are primarily single family, 1 and 2-story, wood-frame structures with basements. Values range from approximately \$30,000 to over \$75,000 with most falling within the \$30,000 to \$40,000 range.

6. Maps. The Flood Insurance Study Map, Plates 01 through 16, was prepared in accordance with "Guidelines for Type 15 Flood Insurance Studies" dated September 1972. Plate 01A is an index for the Flood Insurance Study Map.





EXPLANATION OF ZONE DESIGNATIONS

ZONE	CATEGORY
A	Area of special flood hazards.
V	Area of special flood hazards with velocity.
B	Area of moderate flood hazards.
C	Area of minimal flood hazards.
D	Area of undetermined, but possible, flood hazards.

SPECIAL HAZARD AREA

AREA DATE OF IDENTIFICATION

(NUMBERS ON THIS INDEX REFER TO THE LAST TWO DIGITS OF INDIVIDUAL MAP NUMBERS.)

BASE FLOOD ELEVATIONS (MSL)

ZONE A1 11 FT.
ZONE V1 11 FT.

Date of Eligibility for Flood Insurance:

LEGEND

Zone Boundary

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FALMOUTH, MASS.

MAP INDEX

FIA FLOOD HAZARD BOUNDARY MAPS

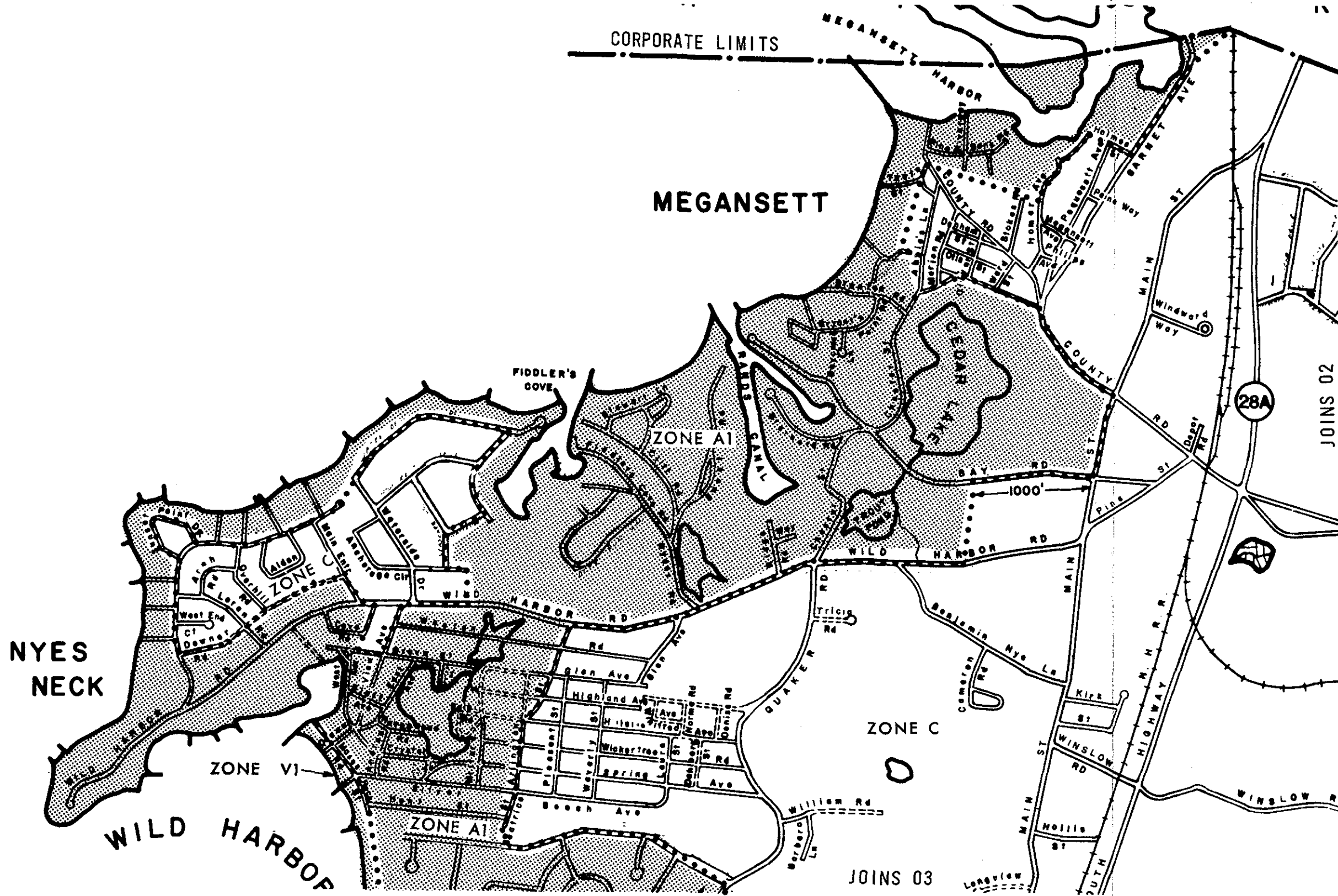
No. H

FIA FLOOD INSURANCE RATE MAPS

No. I

Area eligible for Federally assisted flood insurance
CORPORATE LIMITS

01A



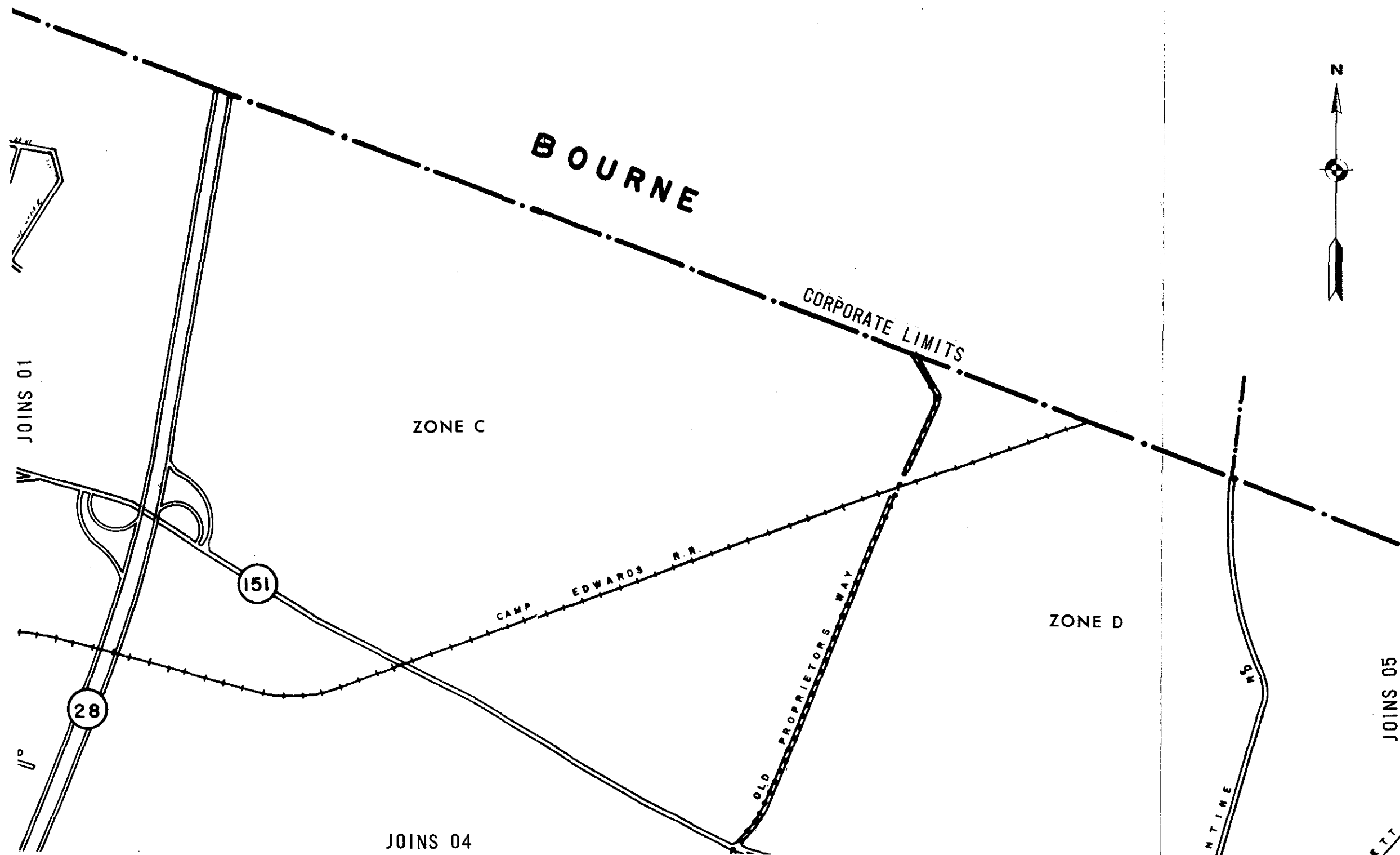
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
Federal Insurance Administration
FALMOUTH, MASS.

APPROXIMATE SCALE
500 0 1000 2000 3000 FEET

FIA FLOOD HAZARD BOUNDARY MAP
No. H

FIA FLOOD INSURANCE RATE MAP
No. I

Effective Date:



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Federal Insurance Administration

FALMOUTH, MASS.

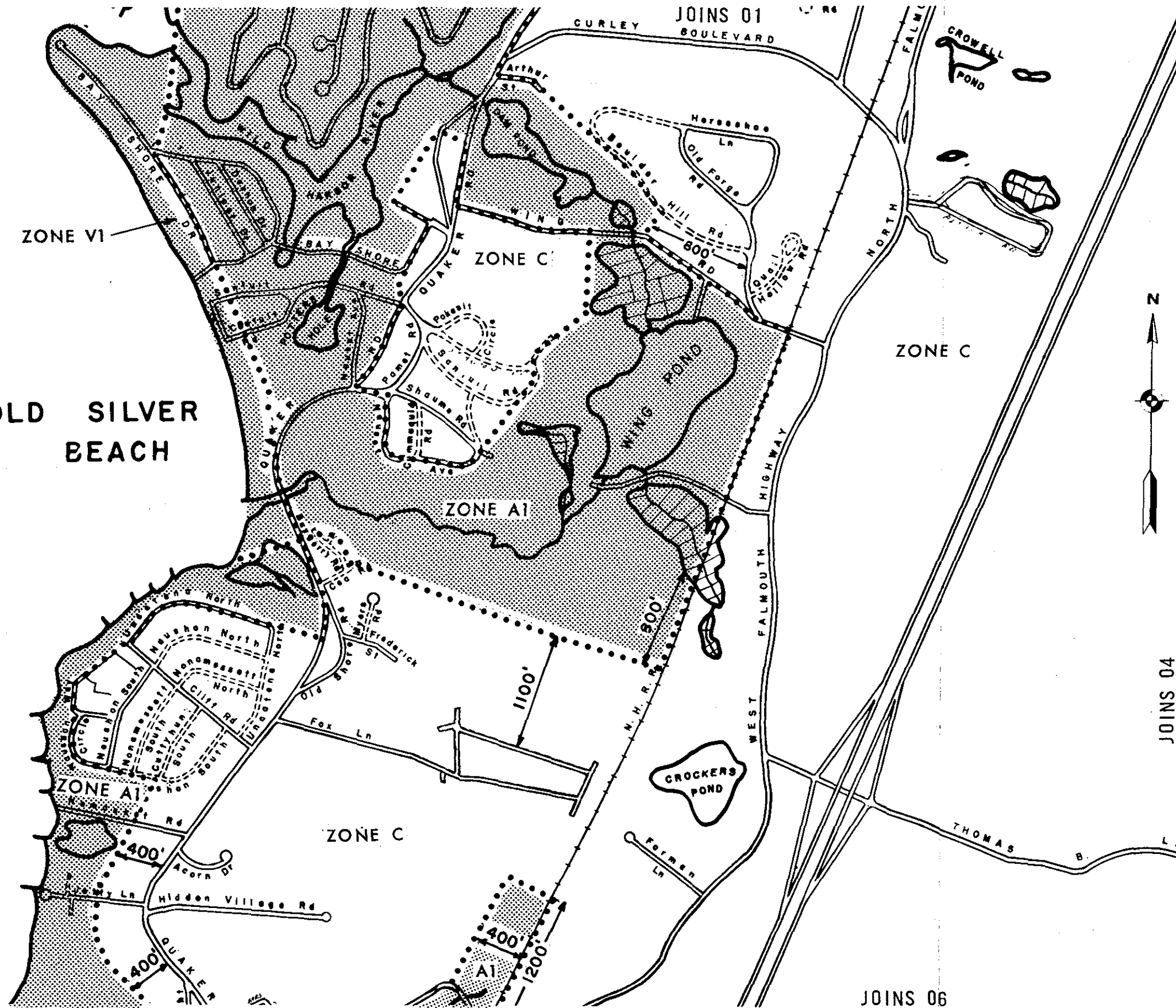
FIA FLOOD HAZARD BOUNDARY MAP
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Effective Date:

FALMOUTH
CLIFFS

OLD SILVER
BEACH



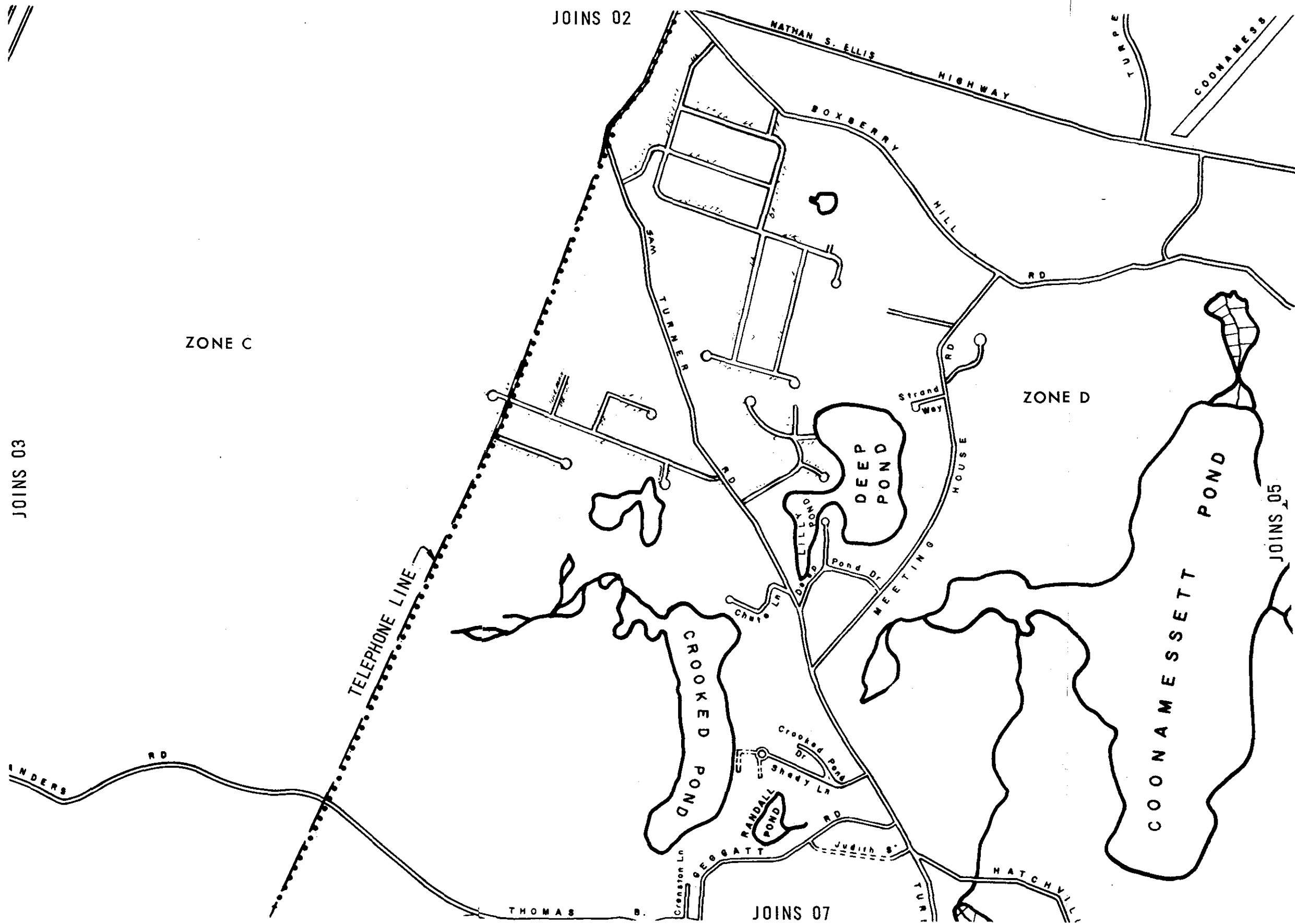
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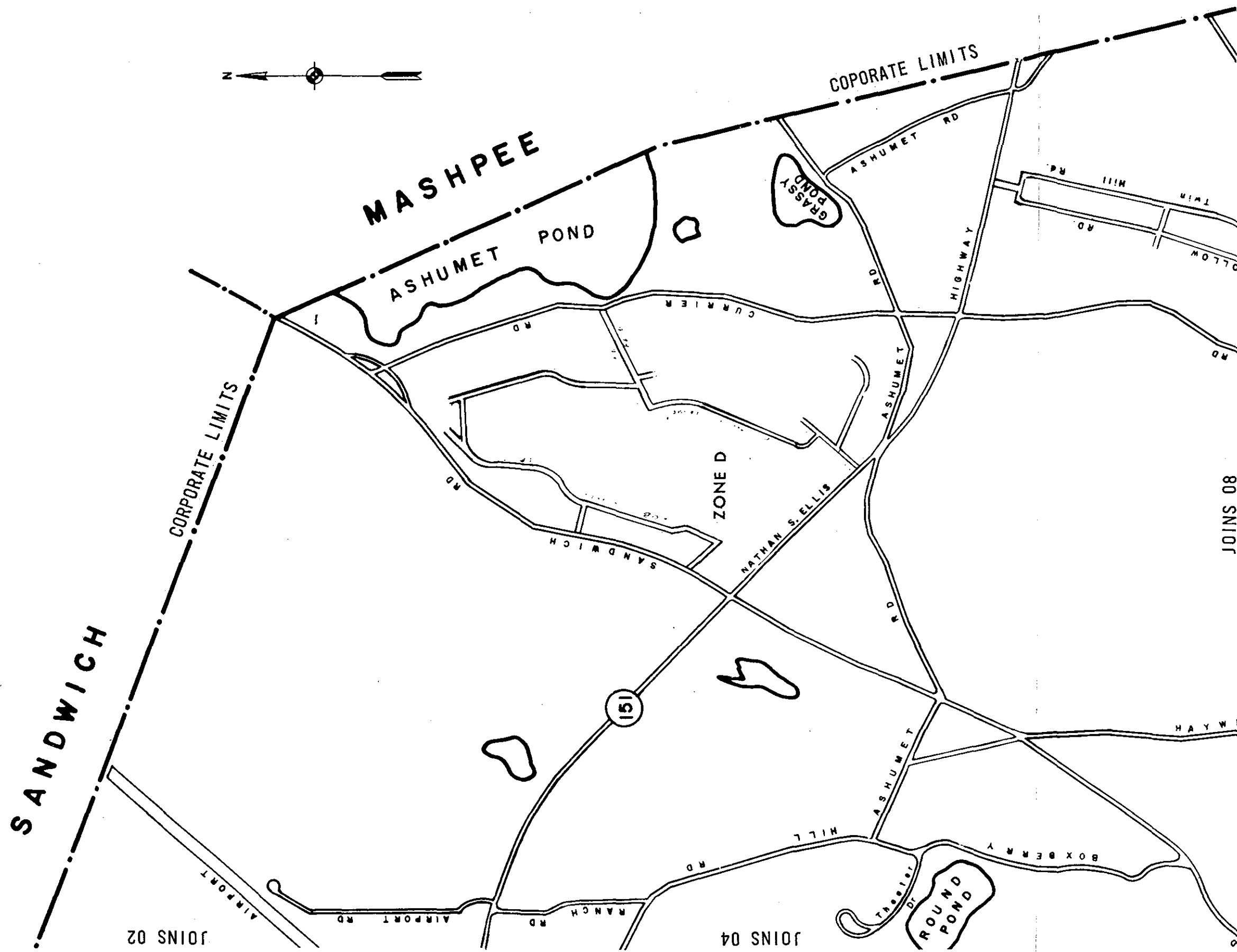
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Effective Date:

CHAPOQUOIT

ZONE VI

CHAPOQUOIT BEACH

WEST FALMOUTH HARBOR

ZONE A1

ZONE A1

ZONE VI

ZONE A1

JOINS 03

28A

28

ZONE C

ZONE D

JOINS 07

JOINS 09



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Federal Insurance Administration

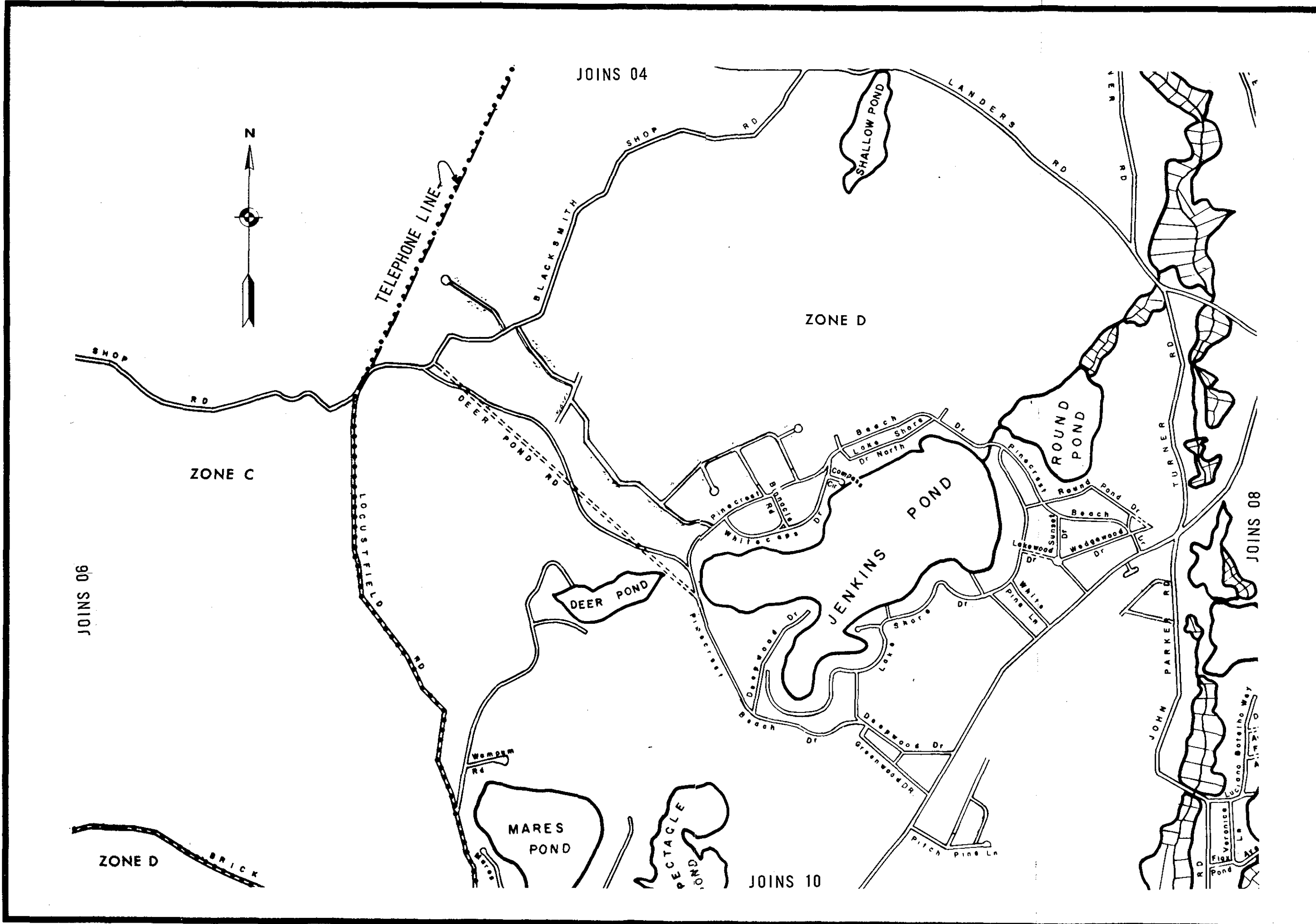
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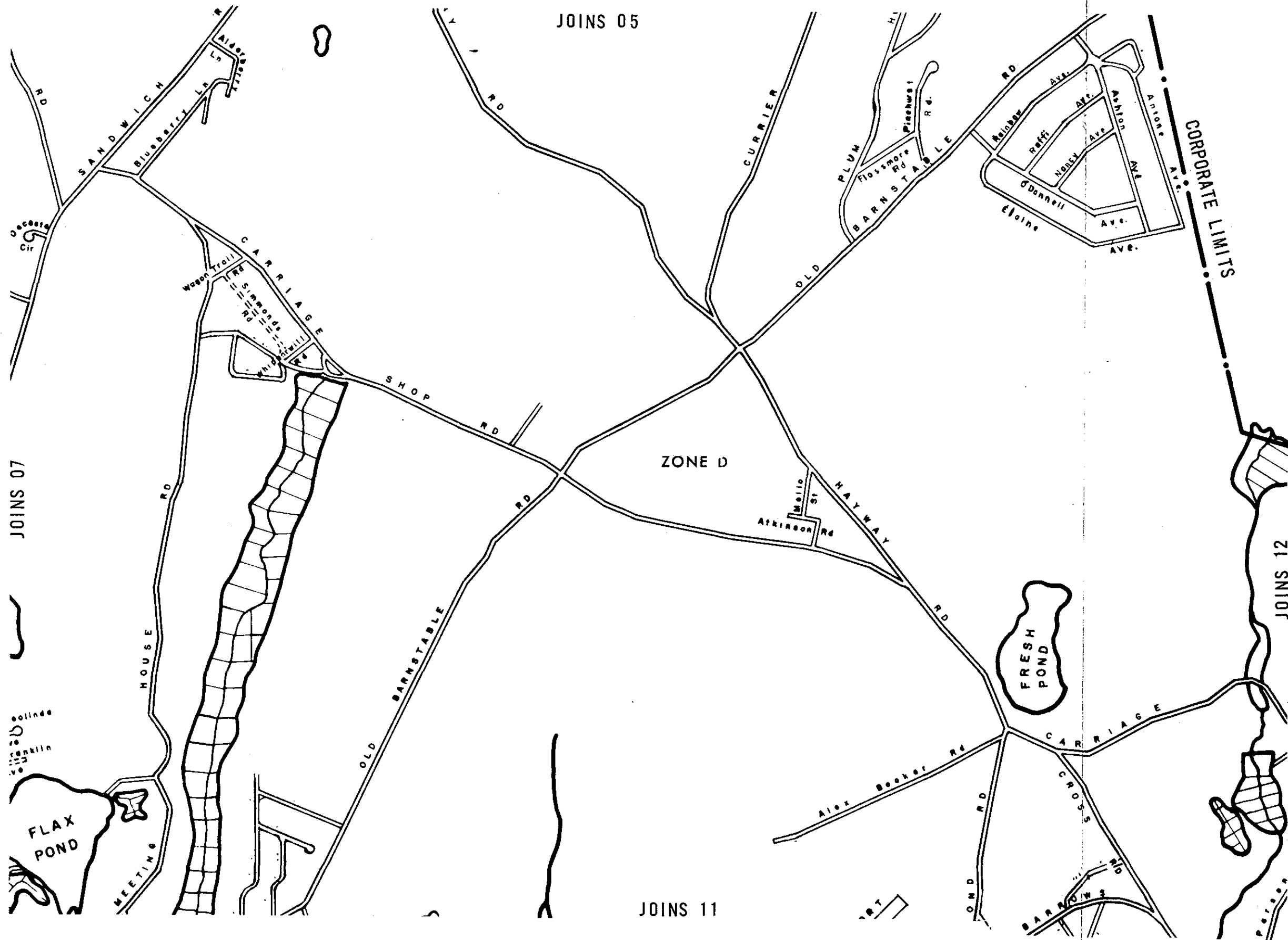
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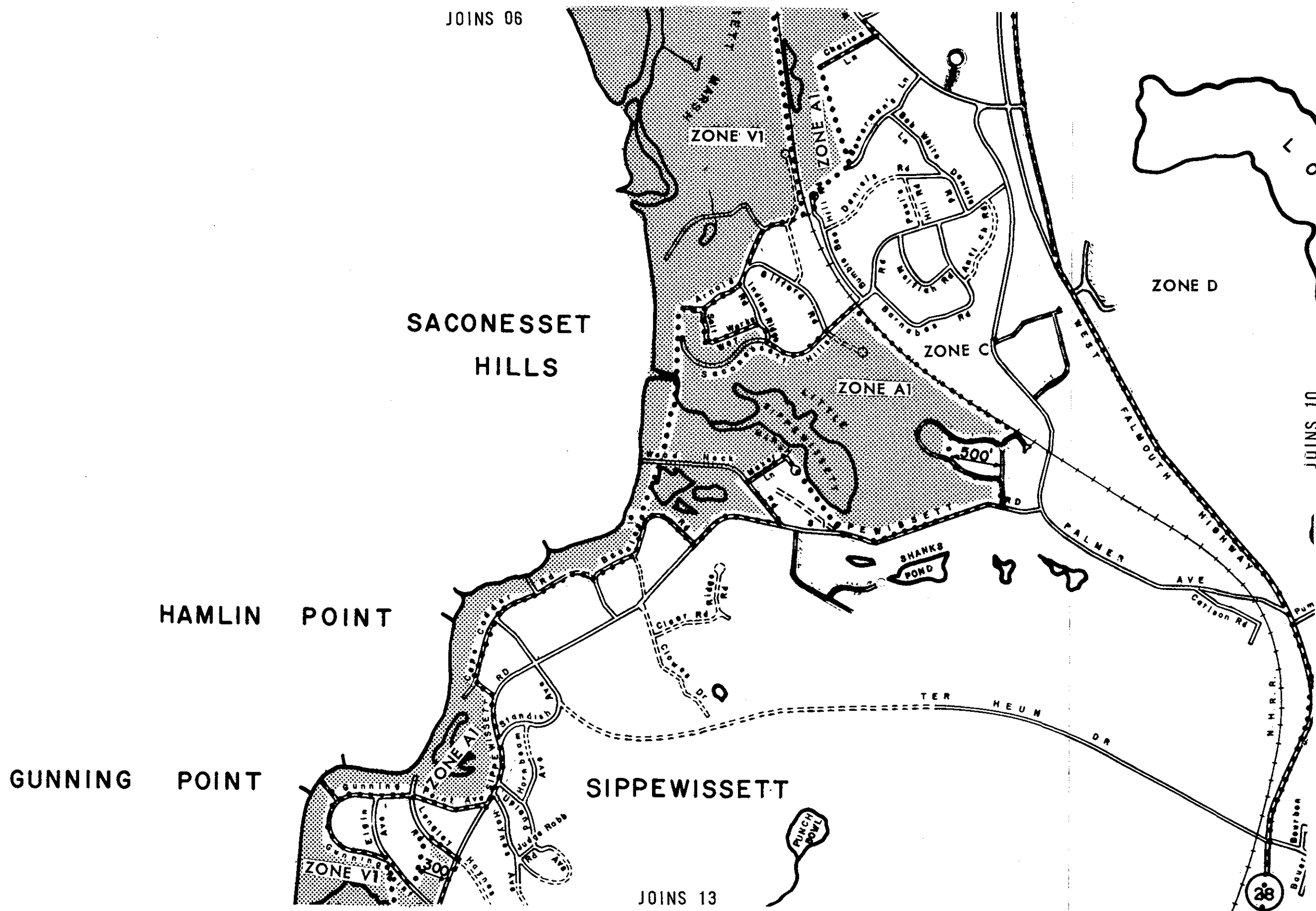


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<p>FIA FLOOD HAZARD BOUNDARY MAP No. H</p>		<p>FIA FLOOD INSURANCE RATE MAP No. I</p>		<p>Effective Date:</p>
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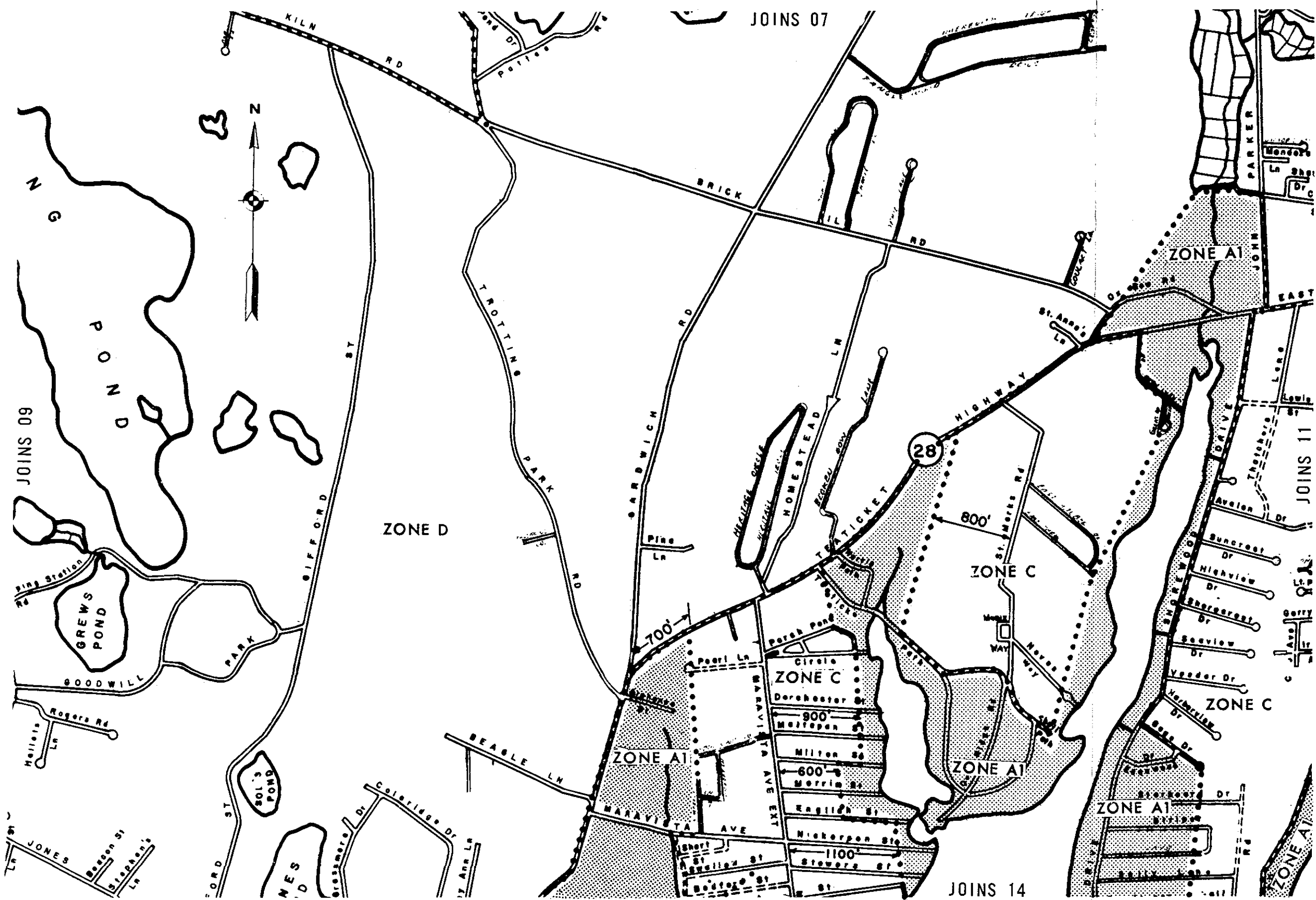
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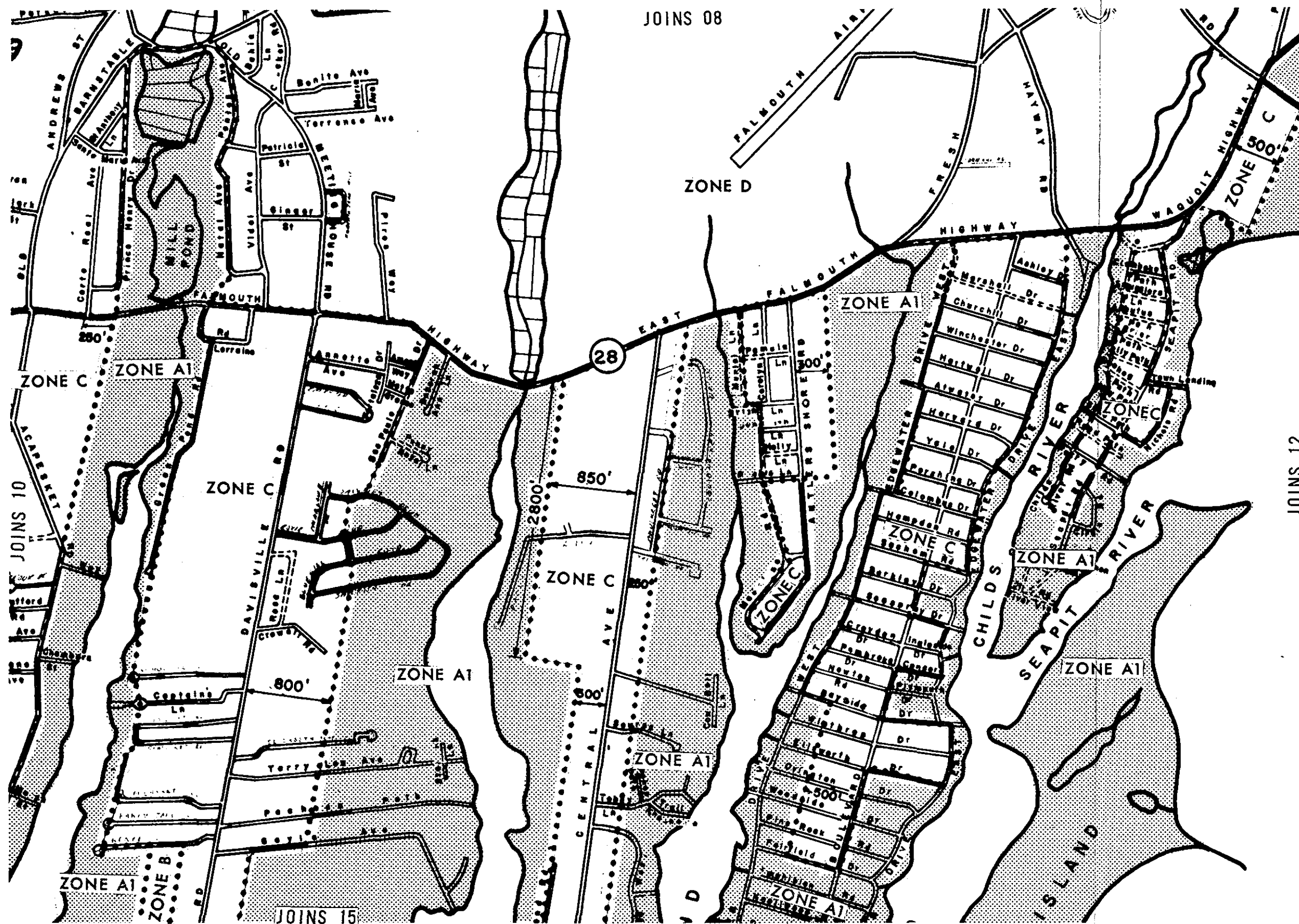
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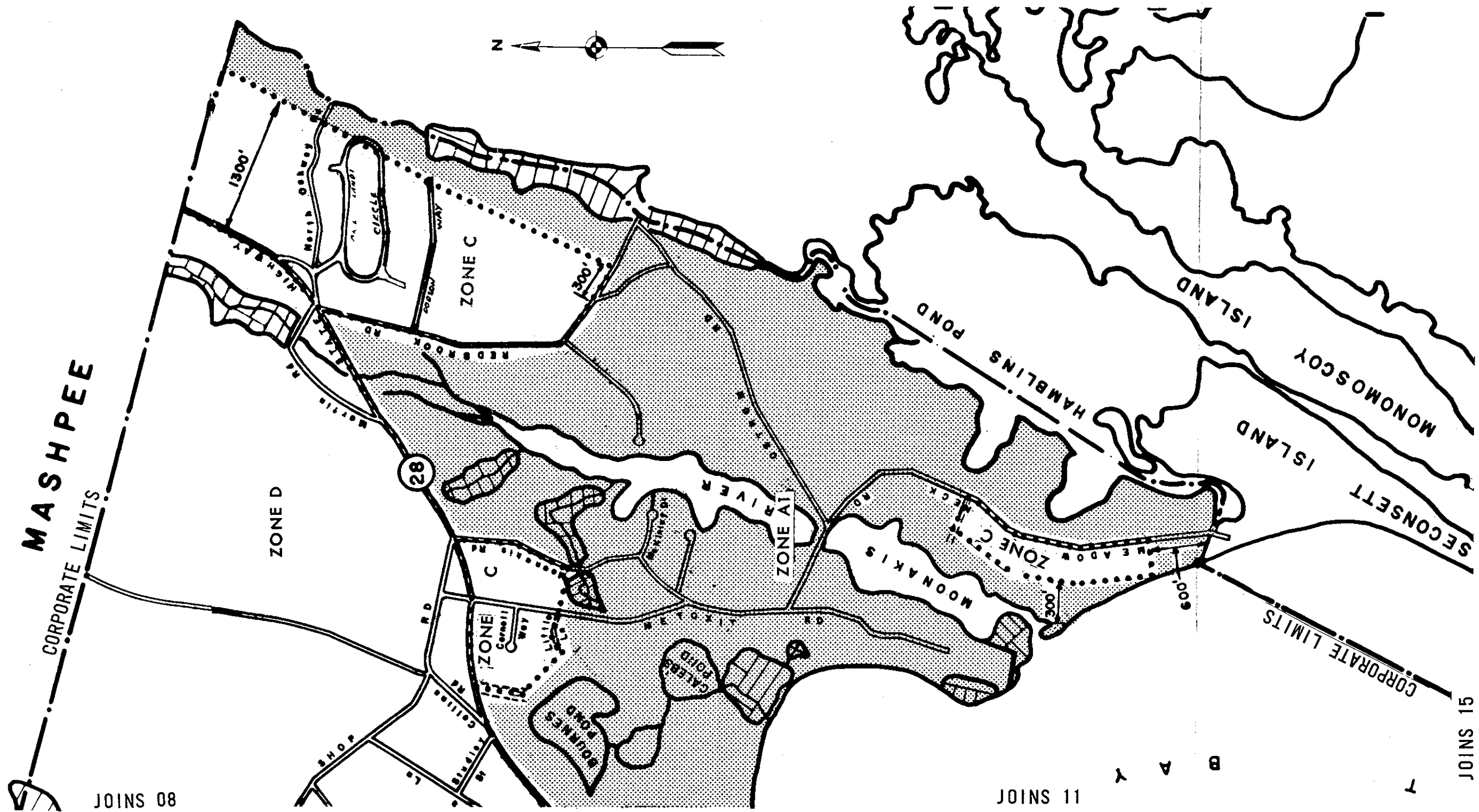
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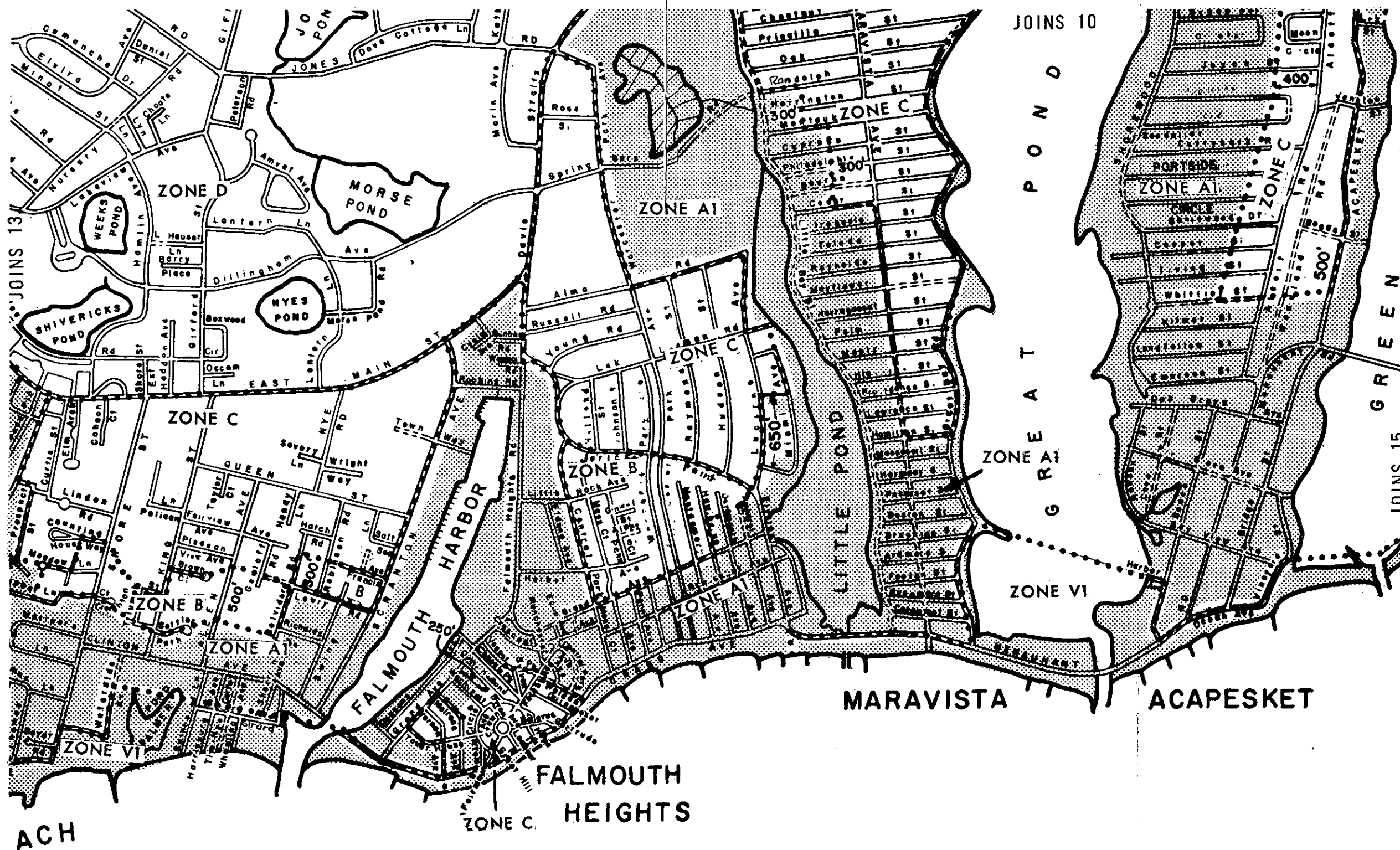
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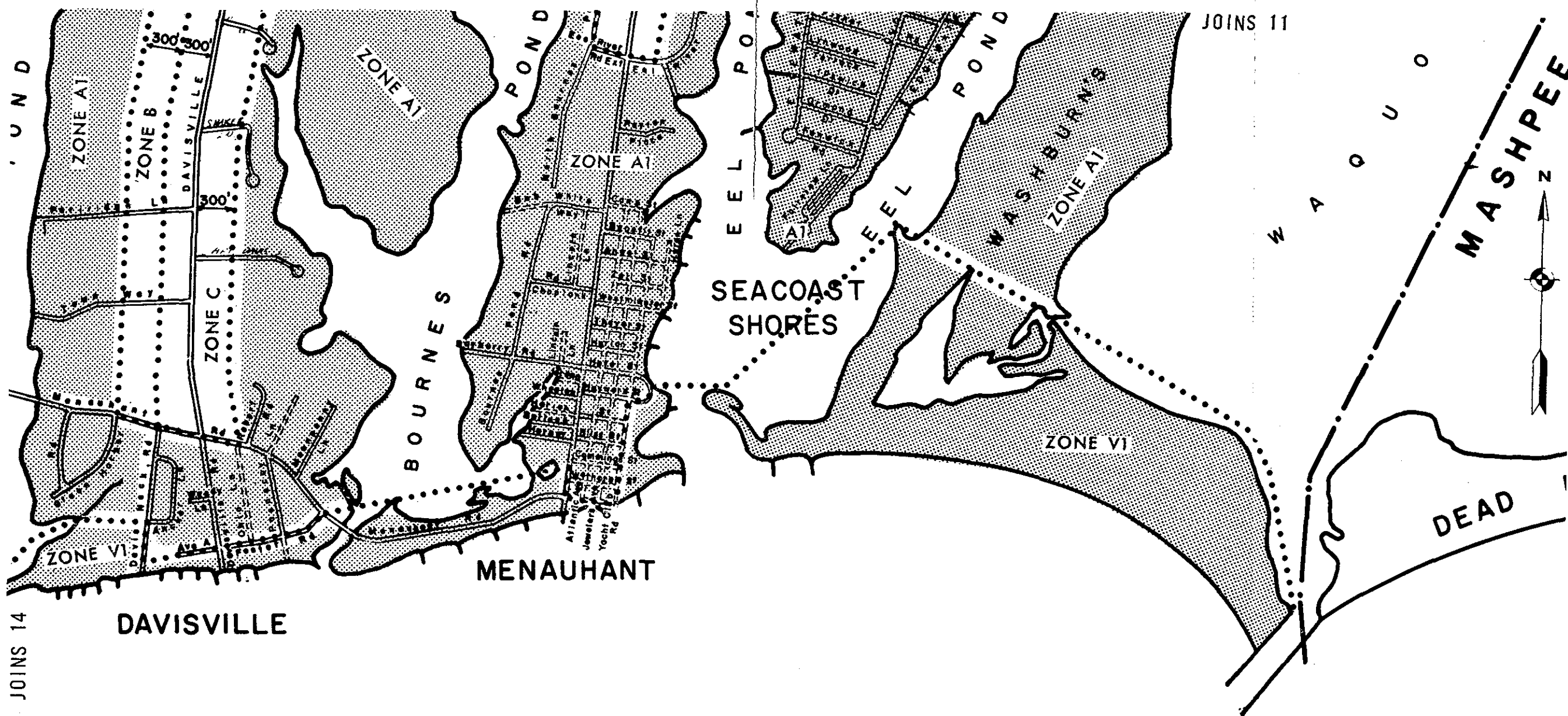
FIA FLOOD INSURANCE RATE MAP
No. I

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500 0 1000 2000 3000 FEET

APPROXIMATE SCALE

14



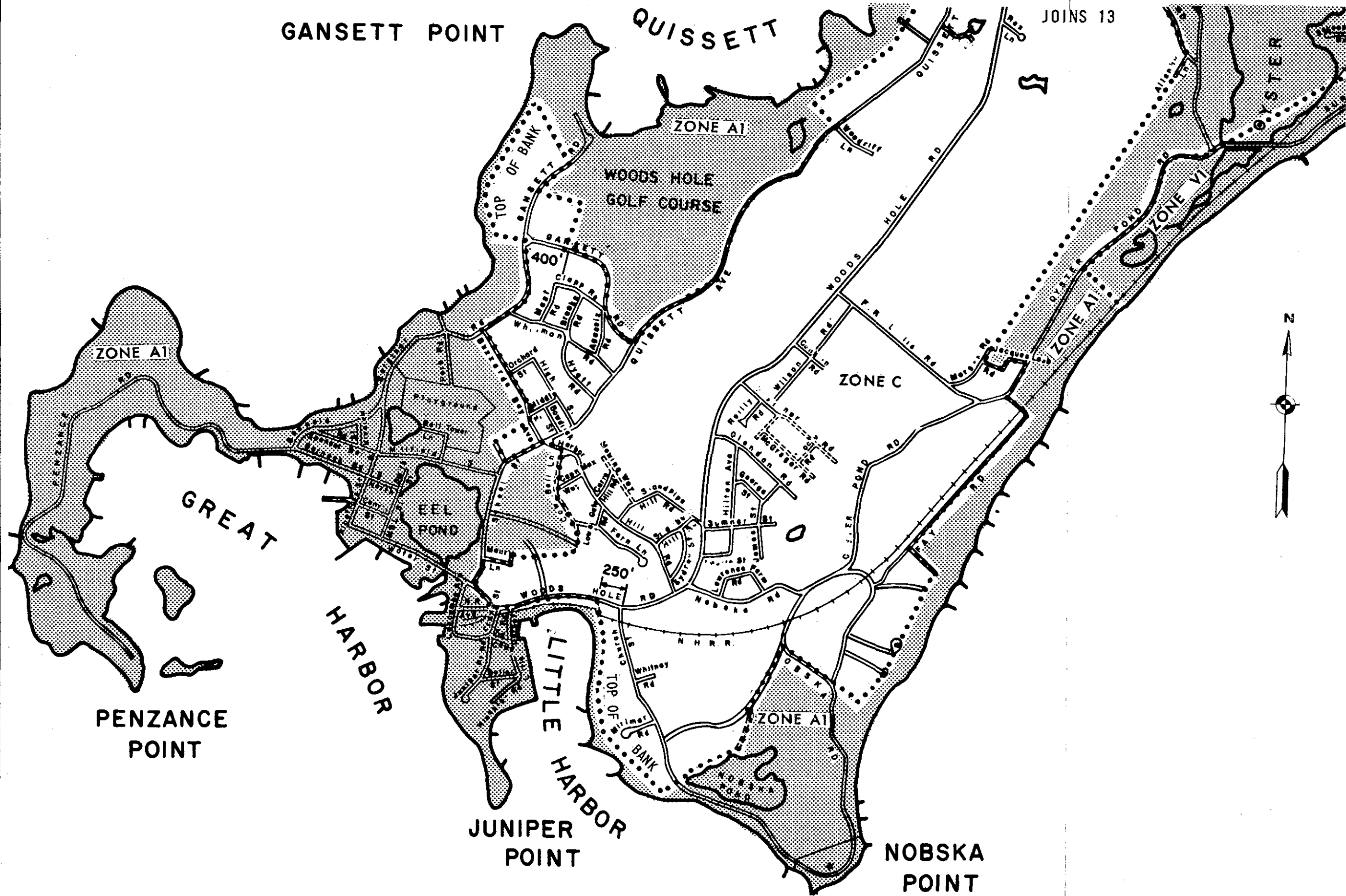
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